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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,999	07/02/2001	Koichiro Kezuka	09792909-5106	1156

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EXAMINER

WILLS, MONIQUE M

ART UNIT

PAPER NUMBER

1746

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/896,999

Applicant(s)

KEZUKA ET AL.

Examiner

Wills M Monique

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

### *Priority*

Japanese foreign priority document(s) 2000-201286, filed July 3, 2000 and submitted under 35 U.S.C. 119(a)-(d), has/have been received and placed of record in the file.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3, 8-10 & 15 -17 are provisionally rejected under the judicially created doctrine of double patenting over claims 1, 26 & 27 of 09/862,621 of copending Application No. 09/862,621, filed May 22, 2001, in view of Olsen U.S. Patent 5,518,839. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

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The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: a battery comprising a cathode, anode and polymer containing electrolyte. Application number 09/862,621 does not expressly claim a nickel current collector, but Olsen teaches that it is conventional to employ nickel current collectors, because they are highly effective in minimizing corrosion in battery environments (col. 1, lines 38-41). Further, nickel does not alloy with lithium and is more noble than copper with respect to oxidation-reduction potential as illustrated by the instant claims.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gan et al. U.S. Patent 6,350,546 and further in view of Peled et al. U.S. Patent 5,472,808.

Gan teaches secondary electrochemical system, wherein the anode electrode comprises a material capable of intercalating and de-intercalating the alkali metal, including a carbonaceous material (e.g., coke, graphite, acetylene black, carbon black, mosecarbon micro beads, glassy carbon, etc.). Graphite is particularly preferred due to its relatively high lithium -retention capacity. See column 3, lines 36-46. A typical secondary cell anode is fabricated by mixing about 90 to 97 weight percent graphite with about 3 to 10 weight percent of a binder material which is preferably a fluoro-resin powder such as polytetrafluoroethylene (PTFE). This anode active admixture is provided on a nickel or copper foil current collector by casting, pressing, rolling or otherwise contacting the active admixture thereto. The nickel foil inherently does not form an allow with the lithium, and the nickel foil is inherently more noble than copper in respect of oxidation-reduction potential. See column 3, lines 58-68 and column 4, lines 1-5. The cathode includes lithium composite oxides, such as  $\text{LiNiO}_2$ ,  $\text{LiMn}_2\text{O}_4$ ,  $\text{LiCoO}_2$ ,  $\text{LiCo}_{0.92}\text{Sn}_{0.08}\text{O}_2$  (col. 4, lines 9-16). The assembly of the cell described herein is preferably in the form of a wound element cell. That is, the fabricated battery devices including the cathode, anode and separator are wound together in a "jellyroll" type configuration or "wound element cell stack" such that the anode is on the outside of the roll to make electrical contact with the cell package. See column 6, lines 52-60.

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As to synthesis of the electrolyte polymer, the presence of process limitations in product claims, where the product is not patentably distinct over the prior art, cannot impart patentability to the produce. In re Stephens 145 USPQ 656 (CCPA 1965).

The reference is silent to an electrolyte containing a polymer compound synthesized by radical.

However, Peled teaches that it is conventional to employ polymer electrolytes in lithium cells (col. 1, lines 40-50 & col. 2 lines 15-20 and 40-40), to increase electrolyte ion transfer (col. 3, lines 55-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the polymer electrolyte of Peled in the cell of Gan, in order to increase electrolyte ion transfer.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Gan et al. U.S. Patent 6,350,546, as applied to claim 1, and further in view of Takami et al. U.S. Patent 6,503,657.

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Gan teaches a nonaqueous lithium cell as described hereinabove.

The reference is silent to the casing comprising a polymer compound film, a metal film, and a polymer compound film are laminated in that order.

However, Takami teaches that it is conventional to employ protective layers on both surfaces of the metal film casing of a nonaqueous lithium battery (. 11, lines 1-5). The protective layers prevent the metal casing from being corroded by the nonaqueous electrolyte (col. 11, lines 5-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the protective layers assembly of Takami in the cell of Gan, in order to prevent the metal casing from being corroded by the nonaqueous electrolyte.

### ***Conclusions***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Notten et al. U.S. Patent 6,346,343 teaches a secondary lithium battery comprising lithium deposited on negative electrode material.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (703) 305-0073. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

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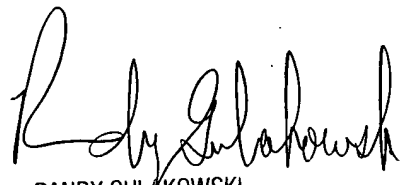
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 703-308-4333.

The unofficial fax number is (703) 305-3599. The Official fax number for non-final amendments is 703-872-9310. The Official fax number for after final amendments is 703-872-9311.

Mw

06/21/03



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